Women and Ischemia Syndrome Evaluation (WISE)
Diagnosis and Pathophysiology of Ischemic Heart Disease
Workshop

October 2-4, 2002

Session 5

1. Topic and Author

Is Retinal Arteriolar Narrowing Differentially Related To The Risk Of Coronary Heart Disease In Women and Men?

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2. Where we stand in 2002. Overview/rationale for inclusion of topic.

Microvascular processes have been hypothesized to play a greater role in the development of coronary heart disease (CHD) in women than men because women: with chest pain appear more likely to have normal coronary arteries; have higher mortality rates after a MI; and have poorer outcomes after coronary artery bypass surgery. Limited data to support hypothesis because: most studies of microvascular dysfunction have been conducted on small numbers of highly selected symptomatic patients ;few have been prospective; none have been population-based; and few noninvasive methods have been available to examine the microvasculature. Based on data from the ARIC and Beaver Dam Eye Studies, using new computer-assisted measurements of the retinal vasculature, we show that microvascular processes are more strongly associated with coronary heart disease in younger women (43-72 years of age) than in similar aged men.

3. Current challenges and the most important issues for future research

1) Need to understand reasons for these gender-related associations.
2) Need studies to correlate retinal vascular findings and direct measures of coronary microvascular flow.
3) Need further study of histopathological associations of retinal, coronary, and cerebral microvasculture.
4) Need to understand whether vasoactive agents (ACE inhibitors) affect retinal microvascular caliber.
5) Need to develop methods to decrease variability of retinal vascular measurement.

4. Current challenges in the areas of communicating messages to health care community, patients and the public

To make sure public understands that this is still a research tool which is in its developmental stages

5. Translating new findings to improved diagnosis and treatment/saving lives.

Better understanding of microvascular disease in the pathogenesis and development of coronary and cerebrovascular disease is needed before these findings can be translated into saving lives.

6. References.

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